AMENDMENTS TO THE CLAIMS

1-16. (Cancelled)

17. (New) An interactive navigation system comprising a mobile apparatus and a server, wherein said mobile apparatus comprises:

an input unit operable to input user input information indicating at least a destination;

a first transmitter unit operable to transmit the user input information to said server;

a storage unit operable to store map data into a storage medium;

a route guidance unit operable to, upon input of the destination via said input unit, determine whether route guidance can be performed by using the map data stored in the storage medium of said storage unit; and

a notification unit operable to notify a user of a storage time point of the stored map data;

wherein said notification unit is operable to notify the user of the storage time point of the stored map data when said route guidance unit determines that the route guidance can be performed;

wherein said first transmitter unit is operable to transmit the user input information to said server when at least one of said route guidance unit determines that the route guidance cannot be performed and the user provides an instruction to update the map data stored in the storage medium of said storage unit in response to said notification unit notifying the user of the storage time point of the map data; and

wherein said server comprises:

a map data storage unit operable to store the map data;

a first receiver unit operable to receive the user input information transmitted by said first transmitter unit;

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a route search unit operable to search for a route based on the user input information received by said first receiver unit and the map data stored in said map data storage unit;

a map data selector unit operable to select, from among the map data stored in said map data storage unit, only map data including the route found by said route search unit; and

a second transmitter unit operable to transmit, to said mobile apparatus, the route found by said route search unit and the map data selected by said map data selector unit.

18. (New) The interactive navigation system according to claim 17,

wherein said server further comprises a billing unit operable to hold a price list including at least unit prices for the map data stored in the map data storage unit, to calculate an amount of charge for the map data selected by said map data selector unit based on the price list, and to generate billing information including at least the amount of charge, and

wherein said second transmitter unit is operable to transmit, to said mobile apparatus, the route found by said route search unit, the map data selected by said map data selector unit, and the billing information generated by said billing unit.

19. (New) The interactive navigation system according to claim 18,

wherein said server further comprises a related information storage unit operable to store related information relating to the map data stored in said map data storage unit,

wherein the price list held by said billing unit includes a unit price for the related information stored in said related information storage unit,

wherein said billing unit is operable to calculate, based on the price list, an amount of charge for the related information relating to the map data selected by said map data selector unit, and to add the calculated amount of charge to the billing information, and

wherein said second transmitter unit is operable to transmit, to said mobile apparatus, the related information relating to the map data selected by said map data selector unit.

20.   (New) The interactive navigation system according to claim 19, wherein said mobile apparatus further comprises:

a second receiver unit operable to receive the related information transmitted by said second transmitter unit; and

a presenter unit operable to present the related information received by said second receiver unit.

21.   (New) The interactive navigation system according to claim 19, wherein said mobile apparatus further comprises a presenter unit operable to present the related information transmitted by said second transmitter unit.

22.   (New) The interactive navigation system according to claim 17,

wherein said mobile apparatus further comprises a present position detector unit operable to detect a present position of said mobile apparatus,

wherein said first transmitter unit is operable to transmit, to said server, the user input information indicating at least the destination inputted by said input unit, and to present position information indicating the present position detected by said present position detector unit,

wherein said first receiver unit is operable to receive the user input information and the present position information which are transmitted by said first transmitter unit,

wherein said route search unit is operable to hold a mobile apparatus position/route management table for recording and managing present positions and routes of mobile apparatuses,

wherein said route search unit is operable to find a plurality of reachable routes to the destination indicated by the user input information received by said first receiver unit,

wherein said route search unit is operable to, for each of the plurality of reachable routes, sequentially calculate a time of each passage of a target mobile apparatus through a link of the reachable route by assuming that the target mobile apparatus moves along each of the plurality of reachable routes at a predetermined speed,

wherein said route search unit is operable to calculate, for each link, a number of presumed passing apparatuses that indicates how many mobile apparatuses are presumed to pass through the link simultaneously when the target mobile apparatus passes through the link based on present positions and routes of mobile apparatuses other than the target mobile apparatus which are recorded in the mobile apparatus position/route management table held by said route search unit,

wherein said route search unit is operable to calculate a weight to be provided to each link based on the number of presumed passing apparatuses calculated for the link, and

wherein said route search unit is operable to search for the route based on a route graph with each link provided with at least the weight calculated based on the number of presumed passing apparatuses.

23. (New) The interactive navigation system according to claim 22,

wherein said server further comprises an input/output unit connected to a communication line network,

wherein said route search unit is operable to externally receive traffic jam information through said input/output unit and the communication line network, and to calculate a weight to be provided to each link based on the traffic jam information,

wherein said route search unit is operable to find the plurality of reachable routes based on a route graph with each link provided with the weight calculated based on the traffic jam information, and

wherein said route search unit is operable to search for the route based on both the weight calculated based on the traffic jam information and the weight calculated based on the number of presumed passing apparatuses.

24. (New) An interactive navigation method of performing navigation based on information provided by a mobile apparatus including an input unit operable to input user input information

indicating at least a destination, a transmitter unit operable to transmit the user input information to an external apparatus, and a storage medium, said interactive navigation method comprising:

storing map data into the storage medium;

determining whether route guidance can be performed upon an input of the user input information including at least the destination via the input unit by using the map data stored in the storage medium;

notifying a user of a storage time point of the stored map data when said determining of whether the route guidance can be performed determines that the route guidance can be performed;

transmitting the user input information from the transmission unit to the external apparatus when at least one of said determining of whether the route guidance can be performed determines that the route guidance cannot be performed and the user provides an instruction to update the map data stored in the storage medium in response to said notifying of the user notifying the user of the storage time point of the map data;

storing the map data into the external apparatus;

receiving the user input information transmitted by said transmitting of the user input information;

searching for a route based on the user input information received in said receiving of the user input information and the map data stored by said storing of the map data into the external apparatus;

selecting, from among the map data stored by said storing of the map data into the external apparatus, only map data including the route found by said searching for the route; and

transmitting, to the mobile apparatus, the route found by said searching for the route, and the map data selected by said selecting of only the map data including the route found by said searching for the route.

25   (New) The interactive navigation method according to claim 24, further comprising

detecting a present position of the mobile apparatus,

wherein said transmitting of the user input information transmits, to the external apparatus, the user input information indicating at least the destination inputted via the input unit, and present position information indicating the present position detected by said detecting of the present position of the mobile apparatus,

wherein said receiving of the user input information receives the user input information and the present position information which are transmitted by said transmitting of the user input information, and

wherein said searching for the route comprises:

creating a mobile apparatus position/route management table for recording and managing present positions and routes of mobile apparatuses,

finding a plurality of reachable routes to the destination indicated by the user input information received by said receiving of the user input information;

sequentially calculating, for each of the plurality of reachable routes, a time of each passage of a target mobile apparatus through a link of the reachable route by assuming that the target mobile apparatus moves along each of the plurality of reachable routes at a predetermined speed;

calculating, for each link, a number of presumed passing apparatuses that indicates how many mobile apparatuses are presumed to pass through the link simultaneously when the target mobile apparatus passes through the link based on present positions and routes of mobile apparatuses other than the target mobile apparatus which are recorded in the mobile apparatus position/route management table of the external apparatus;

calculating a weight to be provided to each link based on the number of presumed passing apparatuses calculated for the link; and

searching for the route based on a route graph with each link provided with at least the weight calculated based on the number of presumed passing apparatuses.

26.   (New) A program that describes an interactive navigation method of performing navigation based on information provided by a mobile apparatus including an input unit operable to input user input information indicating at least a destination, a transmitter unit operable to transmit the user input information to an external apparatus, and a storage medium, said interactive navigation method comprising:

storing map data into the storage medium;

determining whether route guidance can be performed upon an input of the user input information including at least the destination via the input unit by using the map data stored in the storage medium;

notifying a user of a storage time point of the stored map data when said determining of whether the route guidance can be performed determines that the route guidance can be performed;

transmitting the user input information from the transmission unit to the external apparatus when at least one of said determining of whether the route guidance can be performed determines that the route guidance cannot be performed and the user provides an instruction to update the map data stored in the storage medium in response to said notifying of the user notifying the user of the storage time point of the map data;

storing the map data into the external apparatus;

receiving the user input information transmitted by said transmitting of the user input information;

searching for a route based on the user input information received in said receiving of the user input information and the map data stored by said storing of the map data into the external apparatus;

selecting, from among the map data stored by said storing of the map data into the external apparatus, only map data including the route found by said searching for the route; and

transmitting, to the mobile apparatus, the route found by said searching for the route, and the map data selected by said selecting of only the map data including the route found by said searching for the route.

27.   (New) The program according to claim 26,

wherein said interactive navigation method further comprises detecting a present position of the mobile apparatus,

wherein said transmitting of the user input information transmits, to the external apparatus, the user input information indicating at least the destination inputted via the input unit, and present position information indicating the present position detected by said detecting of the present position of the mobile apparatus,

wherein said receiving of the user input information receives the user input information and the present position information which are transmitted by said transmitting of the user input information, and

wherein said searching for the route comprises:

creating a mobile apparatus position/route management table for recording and managing present positions and routes of mobile apparatuses,

finding a plurality of reachable routes to the destination indicated by the user input information received by said receiving of the user input information;

sequentially calculating, for each of the plurality of reachable routes, a time of each passage of a target mobile apparatus through a link of the reachable route by assuming that the target mobile apparatus moves along each of the plurality of reachable routes at a predetermined speed;

calculating, for each link, a number of presumed passing apparatuses that indicates how many mobile apparatuses are presumed to pass through the link simultaneously when the target mobile apparatus passes through the link based on present positions and routes of mobile apparatuses other than the target mobile apparatus which are recorded in the mobile apparatus position/route management table of the external apparatus;

calculating a weight to be provided to each link based on the number of presumed passing apparatuses calculated for the link; and

searching for the route based on a route graph with each link provided with at least the weight calculated based on the number of presumed passing apparatuses.